APPENDIX A

PHOTOGRAPHS

Figure 1. Leach Pad #4. This is one of the areas to be revegetated. The spent ore has a loam texture but contains about 2/3s coarse fragments >2mm. It has some nitrate (approx. 5 ppm) but is severely deficient in P and K. However, with amendment it could serve as a subsoil useful to the deeper-rooting plants, assuming water is present at depth.

Figure 2. Coversoil stockpile 2a shows that steep-slope revegetation is possible where everything is right: loam texture, 50% coarse fragments, 3% organic matter, thick soil, and decent fertility. This stockpile should be applied to slopes.

Figure 3. One reference soil is in the cluster of trees shown here; the foreground is the "Muorseshoe"site, where the reclamation cover is influenced by blending into adjacent natural soil. Organic matter in the reference soil is 18% with lots of N, P, and K in the upper six inches. The soil food web is fungi-dominated and indicates good nutrient cycling. The Muorseshoe site has 5% organic matter and a decent soil food web, probably because it is at least partly in-situ material.

Figure 4. The second ("lower") reference area is in a diverse thicket of tall shrubs, shorter shrubs, grasses (some sedges), forbs. After chiseling our way through revegetated coversoils, it was refreshing to dig a hole in a soil WITHOUT ONE ROCK! But even if we place our best coversoil on gentle slopes, plant communities like this one won't develop for decades or more if started as grass communities. The upper six inches of this soil has 12% organic matter and is fertile. It was friable with a thick mass of roots.

Figure 5. The contrast between revegetation and premine vegetation is stark. The single factor that could have done most to improve revegetation prospects would have been to save the topsoil in two lifts, separating A + B material from underlying horizons. (Lower photo shows the lower reference site.) It remains for us to do the best we can with the resources available.